WORKSHEET 1 SQL

1. A) CREATE B) ALTER
2. A) UPDATE B) DELETE
3. B) Structured Query Language
4. B) Data Definition Language
5. A) Data Manipulation Language
6. C) Create Table A (B int,C float)
7. B) Alter Table A ADD COLUMN D float
8. B) Alter Table A Drop Column D
9. B) Alter Table A Alter Column D int
10. C) Alter Table A Add Primary key B

11. What is data-warehouse?

A data warehouse is a subject-oriented, integrated, time-variant, and nonvolatile collection of data in support of management's decision-making process.

12. What is the difference between OLTP VS OLAP?

Online Analytical Processing, a category of software tools which provide analysis of data for business decisions. OLAP systems allow users to analyze database information from multiple database systems at one time.

Online transaction processing shortly known as OLTP supports transaction-oriented applications in a 3-tier architecture. OLTP administers day to day transaction of an organization.

	OLTP	**OLAP**
users	clerk, IT professional	knowledge worker
function	day to day operations	decision support
DB design	application-oriented	subject-oriented
data	current, up-to-date detailed, flat relational isolated	historical, summarized, multidimensional integrated, consolidated
usage	repetitive	ad-hoc
access	read/write index/hash on prim. key	lots of scans
unit of work	short, simple transaction	complex query
# records accessed	tens	millions
#users	thousands	hundreds
DB size	100MB-GB	100GB-TB
metric	transaction throughput	query throughput, response

13. What are the various characteristics of data-warehouse?

- Organized around major subjects, such as customer, product, sales
- Focusing on the modeling and analysis of data for decision makers, not on daily operations or transaction processing

- Provide a simple and concise view around particular subject issues by excluding data that are not useful in the decision support process
- Constructed by integrating multiple, heterogeneous data sources
- Data cleaning and data integration techniques are applied.
- The time horizon for the data warehouse is significantly longer than that of operational systems
- Every key structure in the data warehouse contains an element of time, explicitly or implicitly
- It is nonvolatile i.e., operational update of data does not occur in the data warehouse environment

14. What is Star-Schema??

Star Schema in data warehouse, in which the center of the star can have one fact table and a number of associated dimension tables. It is known as star schema as its structure resembles a star.

15. What do you mean by SETL?

- A Programmable Semantic Extract-Transform-Load Framework for Semantic Data Warehouses.
- Data extraction - get data from multiple, heterogeneous, and external sources
- Data cleaning - detect errors in the data and rectify them when possible
- Data transformation - convert data from legacy or host format to warehouse format
- Load - sort, summarize, consolidate, compute views, check integrity, and build indicies and partitions
- Refresh - propagate the updates from the data sources to the warehouse
- SETL builds on Semantic Web (SW) standards and tools.
- SETL provides a number of powerful modules, classes, and methods for (dimensional and semantic) Data Warehouse constructs and tasks.